AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application. The language to be added is shown with an underline, and the language to be deleted is shown with a strikethrough.

Claims 1-42 (Canceled)

42. (Previously presented) A composition comprising a bacterial ghost containing an active substance encapsulated therein.

43. (Previously presented) The composition of Claim 42, wherein the active substance is a pharmaceutical substance, a labeling substance, a dye, an agricultural substance, a cosmetic substance, a salt, or an ionic substance.

44. (Previously presented) The composition of Claim 43, wherein the pharmaceutical substance is a polypeptide, an enzyme, a peptide, a nucleic acid, a low-molecular weight active substance, a hormone, an antibiotic, an anti-tumor agent, a steroid, or an immunomodulator.

45. (Previously presented) The composition of Claim 43, wherein the labeling substance is a diagnostic labeling substance.

46. (Previously presented) The composition of Claim 43, wherein the agricultural substance is an insecticide, a herbicide, an anti-nematode agent, an enzyme, a fertilizer, a growth promoter, or a water binding protein.

47. (Previously presented) The composition of Claim 42, further comprising a receptor.

48. (Previously presented) The composition of Claim 47, wherein the receptor is located on the inside of the plasma membrane or is a non-integral membrane component.

49. (Previously presented) The composition of Claim 42, further comprising a fusion protein.

50. (Previously presented) The composition of Claim 49, wherein the fusion protein comprises at least one membrane anchor domain and at least one receptor domain.

51. (Previously presented) The composition of Claim 47, wherein the active substance is immobilized through direct or indirect interactions with the receptor.

52. (Previously presented) The composition of Claim 50, wherein the at least one receptor domain is avidin or streptavidin.

53. (Previously presented) The composition of Claim 42, wherein the bacterial ghost is derived from a gram negative bacterium or a gram positive bacterium.

54. (Previously presented) The composition of Claim 47, further comprising a binding substance which can bind to the active substance.

55. (Previously presented) The composition of Claim 44, wherein the pharmaceutical substance is a nucleic acid and the nucleic acid further comprises a bacterial origin of replication, a prokaryotic selection marker gene, a reporter gene, an immunomodulatory sequence, or a combination thereof.

56. (Previously presented) The composition of Claim 42, further comprising a matrix located inside the bacterial ghost.

57. (Previously presented) The composition of Claim 56, wherein the matrix is formed by polymerization or co-polymerization of monomers.

58. (Previously presented) The composition of Claim 42, further comprising a target specific surface molecule located on an outer surface of the bacterial ghost.

59. (Previously presented) The composition of Claim 44, wherein the pharmaceutical substance is a nucleic acid, and the nucleic acid is complexed with polyhydroxy-alkanoates, hydroxy-fatty acids or combinations thereof.

60. (Previously presented) The composition of Claim 44, wherein the pharmaceutical substance is a nucleic acid, and the nucleic acid is encapsulated in the bacterial ghost with DNA binding proteins.

61. (Previously presented) The composition of Claim 44, wherein the nucleic acid is DNA.

62. (Previously presented) The composition of Claim 44, wherein the pharmaceutical substance is a nucleic acid and more than one nucleic acid are encapsulated within the bacterial ghost, and at least two of the nucleic acids encode for different antigens.

63. (Previously presented) The composition of Claim 60, wherein the DNA binding protein is polylysine or protamines.

64. (Previously presented) A method for preventing or treating disease in an animal or a human comprising administration of the composition of Claim 42 to the animal or the human.

65. (Previously presented) A method of vaccinating an animal or a human against disease comprising administration of the composition of Claim 42 to the animal or the human.

66. (Previously presented) The method of Claim 64, wherein the active substance is a nucleic acid.

67. (Previously presented) A method of providing gene therapy to an animal or human, wherein the composition of Claim 55 is administered to the animal or the human.

68. (Previously presented) A method of making the composition of Claim 42, comprising:

a. providing bacterial ghosts; and

b. contacting the bacterial ghosts with the active substance under conditions permitting packaging of the active substance in the bacterial ghosts.

69. (Previously presented) A method of delivering an active substance to a desired location comprising providing the composition of Claim 42 to the desired location.